What is claimed is:

1.   A readout controlling apparatus for controlling reading conditions at the time of reading data from a recording medium, comprising:

an error correcting means for correcting error of said read data;

an error rate calculating means for calculating an error rate of said error correction; and

a control means for controlling said reading conditions in order to make said error rate small.

2.   A readout controlling apparatus as set forth in claim 1, wherein:

said data is coded in units of predetermined code blocks; and

said error correcting means corrects said error in units of said code blocks;

said error rate calculating means calculates said error rate by using at least one of the number of bytes of data where said error correction was correctly carried out, the number of bytes of data wherein said error correction was not correctly carried out, the number of code blocks wherein said error correction was correctly carried out, and the number of blocks wherein said error correction was not

correctly carried out.

3.   A readout controlling apparatus as set forth in claim 2, wherein

said error rate calculating means calculates said error rate by using results of cumulative addition of at least one of the number of bytes of data wherein said error correction was correctly carried out, the number of bytes of data wherein said error correction was not correctly carried out, the number of code blocks wherein said error correction was correctly carried out, and the number of blocks wherein said error correction was not correctly carried out for at least one code block.

4.   A readout controlling apparatus as set forth in claim 3, further comprising a cumulative code block number control means for controlling the cumulative number of said code blocks.

5.   A readout controlling apparatus as set forth in claim 2, wherein:

said data comprises said information data arranged in a two dimensional plane of row and column directions, an inner code parity indicating an error correction code in the row direction of every column, and an outer code parity indicating an error correction code in the column direction of every row

and

said error correcting means performs inner code error correction using said inner code parity and outer code error correction using said outer code parity.

6. A readout controlling apparatus as set forth in claim 5, further comprising:

at least one first storage means for storing the results of cumulative addition of said inner code error corrections and

at least one second storage means for storing the results of cumulative addition of said outer code error corrections.

7. A readout controlling apparatus as set forth in claim 6, wherein said error rate calculating means reads said results of cumulative addition stored in said first storage means and said second storage means in a predetermined order.

8. A readout controlling apparatus as set forth in claim 7, wherein:

said first storage means and said second storage means are connected in series so that data stored in former stages can be successively output to latter stages; and

said error rate calculating means accesses

one of the storage means of said first storage means
and said second storage means.

9.   A readout controlling apparatus as set forth
in claim 1, wherein:

said recording medium is an optical disk;
and

said control means controls at least one of
an amount of light of a laser diode, a frequency of a
signal superimposed on a signal applied to a laser
diode, an amplitude of the signal superimposed on the
signal applied to a laser diode, a gain of a
photodiode, filter characteristics, focus conditions,
tracking conditions, RF signal characteristics, an
inclination of said optical disk, and a speed of said
optical disk.

10. A player, comprising:

a reproducing means for reproducing data
from a recording medium;

an error correcting means for correcting
error of said reproduced data;

an error rate calculating means for
calculating an error rate of said error correction;
and

a control means for controlling reproduction
conditions of said reproducing means so that said

error rate becomes small.

11. A player as set forth in claim 10, wherein:

said data is coded in units of predetermined code blocks;

said error correcting means corrects said error in units of said code blocks;

said error rate calculating means calculates said error rate by using at least one of the number of bytes of data where said error correction was correctly carried out, the number of bytes of data wherein said error correction was not correctly carried out, the number of code blocks wherein said error correction was correctly carried out, and the number of blocks wherein said error correction was not correctly carried out.

12. A player as set forth in claim 11, wherein:

said error rate calculating means calculates said error rate by using results of cumulative addition of at least one of the number of bytes of data wherein said error correction was correctly carried out, the number of bytes of data wherein said error correction was not correctly carried out, the number of code blocks wherein said error correction was correctly carried out, and the number of blocks wherein said error correction was not correctly

carried out for at least one code block.

13. A player as set forth in claim 12, further comprising a cumulative code block number control means for controlling the cumulative number of said code blocks.

14. A player as set forth in claim 11, wherein:

said data comprises said information data arranged in a two dimensional plane of row and column directions, an inner code parity indicating an error correction code in the row direction of every column, and an outer code parity indicating an error correction code in the column direction of every row and

said error correcting means performs inner code error correction using said inner code parity and outer code error correction using said outer code parity.

15. A player as set forth in claim 14, further comprising:

at least one first storage means for storing the results of cumulative addition of said inner code error corrections and

at least one second storage means for storing the results of cumulative addition of said outer code error corrections.

16.   A player as set forth in claim 15, wherein said error rate calculating means reads said results of cumulative addition stored in said first storage means and said second storage means in a predetermined

5   order.

17.   A player as set forth in claim 16, wherein:

said first storage means and said second storage means are connected in series so that data stored in former stages can be successively output to

10   latter stages; and

said error rate calculating means accesses one of the storage means of said first storage means and said second storage means.

18.   A player as set forth in claim 10, wherein:

15   said recording medium is an optical disk; and

said control means controls at least one of an amount of light of a laser diode, a frequency of a signal superimposed on a signal applied to a laser

20   diode, an amplitude of the signal superimposed on the signal applied to a laser diode, a gain of a photodiode, filter characteristics, focus conditions, tracking conditions, RF signal characteristics, an inclination of said optical disk, and a speed of said

25   optical disk.

19. A recorder, comprising:

a recording means for recording data on a recording medium;

a reading means for reading said recorded data;

an error correcting means for correcting error of said read data;

an error rate calculating means for calculating an error rate of said error correction; and

a control means for controlling recording conditions of said recording means so that said error rate becomes small.

20. A readout controlling method for controlling reading conditions at the time of reading data from a recording medium comprising the steps of:

correcting error of said read data;

calculating an error rate of said error correction; and

controlling said reading conditions so that said error rate becomes small.

21. A readout controlling method as set forth in claim 20, wherein:

said data is coded in units of predetermined code blocks, further comprising the steps of:

correcting said error in units of said code blocks;

calculating the error rate by using results of cumulative addition of at least one of the number of bytes of data wherein said error correction was correctly carried out, the number of bytes of data wherein said error correction was not correctly carried out, the number of code blocks wherein said error correction was correctly carried out, and the number of blocks wherein said error correction was not correctly carried out for at least one code block.

22. A readout controlling method as set forth in claim 21, further comprising the step of:

calculating said error rate by using results of cumulative addition of at least one of the number of bytes of data wherein said error correction was correctly carried out, the number of bytes of data wherein said error correction was not correctly carried out, the number of code blocks wherein said error correction was correctly carried out, and the number of blocks wherein said error correction was not correctly carried out for at least one code block.

23. A readout controlling method as set forth in claim 20, wherein

said recording medium is an optical disk;

and

further comprising the step of controlling at least one of filter characteristics, focus conditions, and a speed of said recording medium.